



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,168	09/30/2003	Jean Bonnet	0514-1122	9808

466 7590 12/09/2005

YOUNG & THOMPSON  
745 SOUTH 23RD STREET  
2ND FLOOR  
ARLINGTON, VA 22202

EXAMINER

CHAWLA, JYOTI

ART UNIT	PAPER NUMBER
----------	--------------

1761

DATE MAILED: 12/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/673,168	<b>Applicant(s)</b> BONNET ET AL.	
	<b>Examiner</b> Jyoti Chawla	<b>Art Unit</b> 1761	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/30/2003</u> . | 6) <input type="checkbox"/> Other: ____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

- a. Claims 1-2 and 4-7 are rejected under 35 U.S.C. 102(e) as being anticipated by Fattuto et al. (US 2004/0197439 A1)

2. Claim 1 recites a method of deacidifying fermented drinks especially to remove acetic acid by first using nanofiltration or reverse osmosis, then neutralizing step by addition of basic compound followed by another round of reverse osmosis to remove all the acid salts, and finally recombining the deacidified second filtration's permeate with the first filtration's retained substance, to form the final deacidified drink.

In regards to claim 1, Fattuto et al. teach a process of reducing the volatile acidity (acetic acid) of wines (solution A) using either reverse osmosis or nanofiltration or ultrafiltration method. The solution is separated into a first concentrate (B), which is the equivalent of applicant's R1, and a first permeate C, which corresponds with applicant's P1. The first permeate (C) contains the solutes to be eliminated, which is later subjected to another filtration step to remove the undesirables, and a deacidified

Art Unit: 1761

permeate (E), which corresponds with applicant's P2. In between the filtration steps, the process describes a reaction stage (6) where one or more high pH compounds (G) are added, which is the same as applicant's recitation. The second permeate (E) is then combined with first concentrate (B) to form the final reconstituted wine (D) (pages 1- 2 of detailed description). Therefore, all of applicant's recited steps of claim 1 are clearly readable on, Fatutto et al.

3. In regards to claim 2, Fatutto et al. disclose the addition of high pH (base or alkali) compounds adapted to at least partially neutralize the volatile acidity in wines, i.e., adding base in predetermined amount based on results desired, which is the intent of the applicant as well.

4. Claims 4 and 5, recite a process that can be performed discontinuously and can also be performed as a continuous treatment, which is clearly anticipated by Fatutto et al. (Page 2, Paragraph 25 and 33).

5. Claim 6 recites the specific example of potassium hydroxide as the alkali used in deacidification of fermented grape juice, Fatutto et al also disclose use of high pH additives like sodium, potassium or calcium compounds, such as in particular hydroxides and carbonates. As for the high rejection rate of the membrane relative to potassium, Fatutto et al., disclose at least a partial deacidification using potassium hydroxide, and in order to remove the potassium salts from wine, it is anticipated that the membrane has a high rejection rate relative to potassium and therefore, Fatutto et al. is considered to inherently read on the recitation of the claim.

Art Unit: 1761

6. In regards to claim 7, Fatutto et al. disclose that tartaric acid is to be retained in the final reconstituted wine. As disclosed (page 3, Table 1) the first reverse osmosis membrane has a high rejection rate relative to tartaric acid, which retains it in the first concentrate (B), and is added back to deacidified permeate (E) to reconstitute the final wine or drink, which is also the intended purpose of the applicant. Fatutto et al. are silent as to the malic acid content of the wine but since their objective is to only remove volatile acidity from the wine (acetic acid and ethyl acetate), and since both tartaric and malic acid molecules are close in molecular weight (NPL reference U), therefore, it is anticipated that the membrane of the first reverse osmosis unit, have similar rejection rate relative to malic acid as it has for tartaric acid and therefore, Fatutto et al. is considered to inherently read on the recitation of the claim.

7.

### ***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 1761

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fatutto et al. (US 2004/0197439 A1).

11. Claim 3 recites that the addition of the alkaline substance to the permeate (P1) is monitored in real time as it is being added to the solution to be deacidified, Fatutto et al. disclose the addition of alkaline substance can be adapted to at least partially neutralize the acid in the permeate (C). In order to adapt to the degree of neutralization desired one can either add a precalculated amount of alkali or gradually add the alkali and monitor the controlled solution in real time, therefore, to modify Fatutto et al., by adding the alkaline compound to the acidic permeate and monitor the pH of the mixture in real time, for its art recognized and applicant's intended purpose would have been obvious.

### ***Claim Rejections - 35 USC § 103***

12. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith (US Patent Number 5480665), in view of Vialatte nee Geolier (US Patent

Number 4461778), and further in view of Banyard et al. (US Patent Number 6406730 B1)

13. Smith teaches a process of removing unwanted volatile acids (acetic acid and ethyl acetate) from fluids; especially wine using reverse osmosis, neutralization and recombination of the desirable retained substances back in the deacidified wine/drink. The process can be a discontinuous or a continuous loop process (Figures 1-3) and the membranes used have high rejection rates relative to the substances they intend to separate e.g., potassium, calcium, malic and tartaric compounds.

14. Claim 1, differs from Smith in that the applicant uses addition of alkali or base to neutralize the acidity of the drink, and Smith uses anion exchange column. However, it is notoriously well known to add alkaline or basic substance to deacidify or neutralize acids in foods and drinks and Vialatte nee Geolier and Banyard et al. provide evidence to the conventionality of the use of basic compounds to deacidify or neutralize foods. To modify Smith in view of the teachings from Vialatte nee Geolier and Banyard et al., and substitute one conventional expedient i.e., anion exchange column, in place of the other conventional expedient, i.e., direct addition of one or more basic compounds, to reduce the acidity of drinks, for its art recognized and applicant's intended purpose would therefore, have been obvious.

15. Smith uses the anion exchange column and thus is silent in regards to claims 2 and 3, which recite the two ways in which the basic compound can be added to reduce acidity of the drink. However, it is notoriously well known to add alkaline or basic substance to deacidify or neutralize acids in foods and drinks by either precalculating

Art Unit: 1761

the amount of basic substance needed by the amount of acid and the increase in pH desired or by adding the basic substance and monitoring the pH of the resulting solution in real time. Evidence to the conventionality of regulated addition of base to neutralize acids is provided by Vialatte nee Geolier, who teaches the use of predetermined amount of basic compound to deacidify wines (Column 1, lines 29-31), and Banyard et al., who teach the addition of basic substance in amounts sufficient to deacidify the foods and increase the pH. To modify Smith and add regulated amounts of basic compound to neutralize acid, for its art recognized and applicant's intended purpose would have been obvious.

16. In regards to claim 6, Smith uses anion exchange membranes with high rejection rate for removal of acetic acid and ethyl acetate, which is also the intent of the applicant.

17. In regards to claim 7, which recites the use of reverse osmosis membranes that have high rejection rate relative to malic and tartaric acid, Smith also teaches the same (column 3 lines 44-50).

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure Bonneau (US Patent Number 4499117), Kligerman et al. (US Patent Number 5665415), Lawhon et al. (US Patent Number 4643902), Tudhope (WO 01/78881 A1), Mordechal et al. (E P 0460339 A1), and Holstein and Kappert Maschfab (1973 DE-22320660)

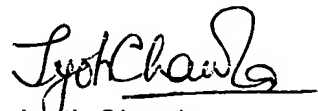
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jyoti Chawla whose telephone number is (571) 272-8212. The examiner can normally be reached on 8:00 am to 4:30 pm.



Art Unit: 1761

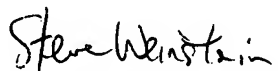
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on (571) 272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jyoti Chawla  
Examiner  
Art Unit 1761

\*\*\*

  
STEVE WEINSTEIN 1761  
PRIMARY EXAMINER  
12/7/05